

(12) United States Patent

Fujii

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(54) ACCELERATION SENSOR AND PROCESS FOR THE PRODUCTION THEREOF

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Related U.S. Application Data

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	U.S. Cl.						
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		438	/459; 25	7/415, 41	6, 417,	418, 419	9

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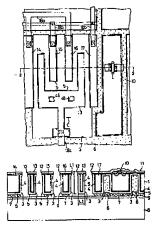
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(57) ABSTRACT

A single crystal silicon substrate (1) is bonded through an SiO₂ film (9) to a single crystal silicon substrate (8), and the single crystal silicon substrate (1) is made into a thin film. A cantilever (13) is formed on the single crystal silicon substrate (1), and the thickness of the cantilever (13) in a direction parallel to the surface of the single crystal silicon substrate (1) is made smaller, than the thickness of the cantilever in the direction of the depth of the single crystal silicon substrate (1), and movable in a direction parallel to the substrate surface. In addition, the surface of the cantilever (13) and the part of the single crystal silicon substrate (1), opposing the cantilever (13), are, respectively, coated with an SiO₂ film (5), so that an electrode short circuit is prevented in a capacity-type sensor. In addition, a signalprocessing circuit (10) is formed on the single crystal silicon substrate (1), so that signal processing is performed as the cantilever (13) moves.

13 Claims, 15 Drawing Sheets



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